

5 **MULTIPLE POWER MODE AMPLIFIER WITH BIAS MODULATION
OPTION AND WITHOUT BYPASS SWITCHES**

ABSTRACT OF THE DISCLOSURE

10 A multiple power mode amplifier provides a low and a high power mode without
using switches. This amplifier may be used in radio frequency (RF) applications such as mobile
telephones, pagers, portable digital assistants, and wireless e-mail devices. In the low power
mode, the power consumption of the amplifier is reduced, which will increase operation time,
especially important for battery-operated devices. In one implementation, the amplifier includes
a number of impedance matching network units (130, 140, 150, and 160), impedance transformer
(170), and a power stage (120). An implementation provides further power consumption savings
15 by modulating a bias of an amplifier stage.